

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of

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Application No. U.S. National Stage of PCT/IL98/00568

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Docket No.: 106153

For: DETECTION AND RECOGNITION OF OBJECTS BY MULTISPECTRAL
SENSING

**TRANSLATION OF THE ANNEXES TO THE
INTERNATIONAL PRELIMINARY EXAMINATION REPORT**

Director of the U.S. Patent and Trademark Office
Washington, D.C. 20231

Sir:

Attached hereto is a translation of the annexes to the International Preliminary
Examination Report (Form PCT/IPEA/409). The attached translated material replaces the
First page of the Specification and all the claims.

Respectfully submitted,



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REPLACED BY
ART 34 AMDT

**Determination of temperature and/or emissivity function of objects by
remote sensing**

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FIELD OF THE INVENTION

The present invention relates to a method and a system for remotely determining temperature and emissivity parameters of objects by multispectral measurements.

10 **BACKGROUND OF THE INVENTION**

Various approaches have been used, for example, for passive remote sensing of the ground. Thus, maps of surface brightness, temperature and emissivity have been used for investigating geological surface properties (Kahle et al, 1980, Applied Optics, 19, 2279), whereas maps of thermal
15 inertia have been used to infer subsurface properties of soil (Price, 1977, Journal of Geophysical Research, 82, 2582).

The detection of underground structures requires penetration of the ground and is therefore accomplished by active sensing techniques, such as radar (Blake, 1993, "Ground-Penetration Radar Developed by Sweden",
20 International Defense Review, 3, 193; von Maydell et al, 1987, U.S. Patent 4.675,677), or combined passive sensing and radar (Clark et al, SPIE - The International Society for Optical Engineering, 1942, 178).

It is acknowledged in the prior art, that emissivity of various